

Project Leader's Report

January - 2003



USDA Forest Service - Southern Research Station - 320 Green Street Athens GA 30602 - <http://www.srs.fs.fed.us/disturbance>



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Technology Transfer :

• Gary Achtemeier, Ken Outcalt, Scott Goodrick, Yongqiang Liu, and Tom Waldrop attended the National Fire Plan Coordination Meeting in New Orleans. The 300 plus attendees at this conference included federal, state, NGO, and private individuals interested in wildland fire and our progress and plans for dealing with wildfire in the US. Tom presented a paper during the national program; Gary and Ken, and Deb participated in the R&D session.

• Gary Achtemeier presented a paper co-authored by Scott Goodrick, and Yongqiang Liu on "Fire and Smoke Research in the South in Association with Southern High-Resolution Modeling Consortium (SHRMC)."

• Deborah Kennard sent a poster on "An Internet-Based Encyclopedia of Southern Fire Science and Management Knowledge: Ready Access in the Right Information in the Right Form," a poster co-authored by Dale Wade and Mike Rauscher (Bent Creek).

• Ken Outcalt presented a poster and served on a panel. His poster was on "Quantifying the Tradeoffs of Fire and Fuels Management Options for the Longleaf Pine Ecosystem of The Gulf Coastal Plains." His panel presentation was on "Rapid Response to Florida wildfires of 1998," and the panel answered questions about rapid response to wildfire for an audience of about 60 researchers and fire administrators.

Outreach Activities:

Sixty visitors registered at the Hitchiti Interpretive Trail in January, and 25 people stopped by the office for information and assistance.

During the month of January, five formal tours were given at the Brender Demonstration Forest: a Loggers Workshop sponsored by the Southeastern Wood Producers Association, the Georgia Forestry Commission, DNR Nongame and the US Forest Service; the Mercer University Environmental Science Outdoor Lab studying Total Biota; the Tyler Wheeler family; and a planning session for upcoming training on temporary haul road construction in compliance with Georgia BMP's.



Meetings / Reports :

- Scott Goodrick will participate on the team tasked at the NFP Coordination meeting with preparing a strategic plan for fire behavior research.
- John Stanturf, Chair of the Restoration of Temperate and Boreal Forest Working Party of IUFRO (1.17.02), initiated an electronic newsletter for the Working Party and distributed the first issue. Dmitry Lima and Pat Outcalt are responsible for layout and production of this and other reports. Contact Stanturf (jstanturf@fs.fed.us) to be added to the mailing list.
- Stanturf has been invited to participate in two Technical Assistance Visits (TAV) for other Research Work Units. On March 11-12, the new RWU "Social and Ecological Dynamics of the Wildland-Urban Interface" will hold a TAV in Gainesville, FL. On May 6-8, the Wetlands Center in Charleston, SC will hold a TAV.
- Alex Clark has been invited to serve on the technical committee for the Hoffman Forest. The North Carolina State University Forest Foundation is searching for the best economically viable forestry technology that can be implemented on the Hoffman Forest. The Board of Directors intends to maintain some variation in management schemes, but at the same time try to maximize the potential production of the Forest.
- The Coastal Plains Chapter of the Society for Ecological Restoration will be held on February 27 - 28, 2003 at the University of Georgia. Ken Outcalt will be involved with the poster session and field trip to the Piedmont National Wildlife Refuge on March 1st.
- Ken Outcalt heard the following "take home" messages from the National Fire Plan meeting in New Orleans:
 - Accountability for funds given, with real, observable, measurable accomplishments
 - Cooperation among agencies, with NGOs, states, other private groups such as homeowners associations.
 - Competition for scarce resources
- The Coordinating Committee for the 2003 Agroforestry and Wildlife Field Day met at Griffin, GA to select topics to be presented. Among the topics selected was Boyd Edwards' study on Longleaf-Loblolly Pine in the Piedmont for Forest Health Benefit. Assisting Boyd with the installation of the study at Griffin were Hitchiti Experimental Forest SCSEP employees, Robert Cornelious, Ira Freeman, George Ross and Reather Sanford. (see photo below)
- Tom Waldrop and Sandra Rideout met with Barry Clinton of the Coweeta Hydrologic Laboratory on December 10. Tom and Sandra will join the Coweeta Research team in a multi-disciplinary study of the ecological impacts of high-intensity prescribed fires in the Southern Appalachian Mountains. Study plots established in the treatment area will provide data for Tom's program on restoration of Table Mountain pine communities. These study plots will also provide data for Tom and Sandra's work on classifying fuels in the Southern Appalachians. Waldrop and Rideout will monitor fire intensity through the 500-acre burn unit to examine intensity impacts on fuel reduction and vegetative response.
- On January 23, Waldrop met with Dean Simon of the NC Wildlife Resources Commission to discuss plans for prescribed burning on the Green River Game Lands in Polk County, NC. Several burns are planned in support of Waldrop's research for the National Fire and Fire Surrogate Study. Impacts of these burns will be measured for birds, mammals, soils, insects, pathogens, vegetation, fuels, and economics. A total of 350 acres will be burned to reduce fuels in six treatment areas. In three treatment areas, chainsaw crews felled all mountain laurel and rhododendron shrubs one year ago. Fuel loading is high and fire behavior will be monitored closely. Burns will be conducted between February 1 and April 10, 2003, with cooperation from the NC Wildlife Resources Commission, NC Forest Service, Andrew Pickens Ranger District (Sumter National Forest), and the National Forests of North Carolina.
- Mac Callaham met with Dan Richter, Duke University, about a proposal to be submitted to the National Commission for Science on Sustainable Forestry for work on the Calhoun Experimental Forest.



Terry Price, Georgia Forestry Commission, and the amazing SCSEP team from the Hitchiti Experimental Forest

Visitors :

• Rep. Max Burns (R-GA) and staff Nancy Bobbitt and Thomas Wyatt visited the Athens lab to learn more about the Forest Service. Burns represents District 12, which includes Athens. Burns is newly elected and is on leave from his position at Georgia Southern University as Professor of Information Technology. A Fulbright Scholar, Burns runs a cattle and timber ranch near Sylvania in Screven County. Stanturf, with Jim Hanula (SRS-4505) and Mike Bowker (SRS-4901), gave Congressman Burns an overview of the Forest Service and the work of the projects located in Athens.



Thomas Wyatt and Nancy Bobbitt, Staff for Congressman Max Burns

• Dr. Ralph E. J. Boerner will visit the Southern Appalachian and Piedmont Team in Clemson during the week of February 3-7, 2003. Dr. Boerner is an internationally-respected soil ecologist and serves as head of the Department of Evolution, Ecology, and Organismal Biology at Ohio State University. He will work with Tom Waldrop and Mac Callaham on impacts of fuel reduction on soil microbial activity. This research is a component of the National Fire and Fire Surrogate Study. Boerner, Waldrop, and Callaham will submit a paper to the Soil Science Society for impacts measured on study sites in Ohio, South Carolina and North Carolina.



Director Peter Roussopoulos visited Athens to update employees on Competitive Sourcing

• Professor Jorge Paladino visited the unit from Rio de Janeiro, Brazil. Jorge was a visiting scientist with the unit in 2001-2002. He met with unit scientists to discuss potential collaborative research in Brazil.

Funding :

• Unit scientists submitted 10 proposals to the Joint Fire Sciences Program, and were cooperators on other proposals. Competition should be intense this year, with reportedly more than 250 proposals submitted for funding in FY 2003. The following proposals were submitted:

– “Intensive grazing for fuels management in pine flatwoods communities on the wildland/urban interface in north Florida (Mac Callaham and Joe O’Brien)



Goats eating Saw Palmetto!

–Exploring spatial variation in climate to predict future fuel and fire dynamics in pine rockland ecosystems (Joe O'Brien; Co-PIs Ross and Sah, Florida International University)

–Filling knowledge gaps on mechanisms of post fire mortality in ancient longleaf pines (*Pinus palustris*) (Joe O'Brien; Co-PIs Bob Mitchell, Jones Center, and Kevin Hiers, Eglin AFB)

–Development of prescribed fire planning tools using climatology and seasonal forecasts (Scott Goodrick; Co-PI Deborah Hanley, FL Division Forestry)

–Incorporating crown fire potential into a large area fire risk assessment system (Scott Goodrick; Co-PIs Jim Brenner, FL Division Forestry and Jim Smith, Space Imaging)

–Wildland fire, smoke, and super fog—the micro-meteorology of the greatest hazard to life and property from prescribed fire in the South—testing the radiative cooling hypothesis (Gary Achtemeier and Warren Heilmen, and Xindi Bian North Central Research Station; Co-PIs Tom Mote and Luke Naeher, University of Georgia; Dan Leathers, University of Delaware; Ananthakrishna Sarma, Center for Atmospheric Physics)

–Use of advanced numerical models for improved parameterizations of plume rise from wildland fires in smoke dispersion and air quality models (Scott Goodrick; Co-PI Phil Cunningham, Florida State University)

–Implementing sustainable management alternatives for longleaf pine forest ecosystems: fuels, wildfire risk and effects on the biological community (Dale Brockway, Bill Boyer, and Ken Outcalt)

–Survey of Non-Industrial Private Forest (NIPF) landowners' program needs concerning fuels reduction, wildfire prevention and fire restoration in the southeastern United States (Sandra Rideout and Tom Waldrop; Co-PIs Brian Oswald, Michael Legg, and Ray Darville, Stephen F. Austin University)

–Assessing the fire-dependence of rare southeastern primary burrowing crayfish (Tom Waldrop; Co-PIs Arnold Eversole and Shane Welch, Clemson University).

• Janet Revell attended travel training in Asheville. She and Pat Mead (facility support services in Athens), spent a day with Soon Fletcher, SRS travel coordinator.

• John Stanturf, Dmitry Lima, Pat Outcalt, and Ken Forbus have assumed responsibility for Working Party websites within Division 1 of IUFRO. Stanturf is nominally the web moderator for the Division, but as everyone knows, Lima, Outcalt, and Forbus will do the *real* work.

• Kim Crider, SRI student at University of Tennessee, has relocated to the Athens lab while she finishes writing her thesis and seeks a PhD program.



Janet Revell at her office

GPRA Accomplishments:

Category	FY 2002 Total	FY 2003 To Date
Number of Refereed Journal Publications	9	5
Number of Non-Refereed Publications (include abstracts)	53	4
Number of Publications (refereed + non-refereed)	62	9
Number of Tours	46	27
Number of Short Courses/Training	8	4
Number of Invited Presentations to Scientific Organizations	6	1
Number of Invited Presentations to Lay Organizations	25	31
Volunteer Presentations to Scientific Organizations (non-GPRA)	28	8
Number of Technology Transfer Activities (other than above)	172	60
Outside Funding	\$3,227,500	\$45,563

News from around the Region :

- The Taking Wing program, a cooperative program of Ducks Unlimited and the Forest Service, will likely move from Region 10 to International Programs and SPF. Coordination will move from DU headquarters in Memphis to the WO. Former TW Coordinator Cynthia Ragland is the new District Ranger on the Oakmulgee District of the Talladega National Forest in Brent, AL.
- International Paper has promoted Dr. Sharon Haines to director of sustainable forestry and forest policy, expanding her previous responsibilities to providing leadership on sustainable forestry, forest policy and environment, and health and safety to IP's Forest Resources business. She will continue to be based in Savannah, Georgia.
- The position of Professor and Director of the School of Forest Resources and Conservation at the University of Florida is open and Director Wayne Smith will retire. Formal review of applications will begin on March 1, 2003.
- The U.S. Departments of Agriculture and Interior initiated awards for efforts under the National Fire Plan. Some of the winners receiving awards at the annual fire plan conference in New Orleans were from the Southern Region. The Excellence in Implementing the National Fire Plan award went to Sami Gray, fire control officer, U.S. Fish and Wildlife Service, Southeast Louisiana Refuges Complex and to The Nature's Conservancy's Fire Initiative. The award for Excellence in Hazardous Fuel Treatment went to Roger Boykin, regional fire coordinator, Southeast Region, U.S. Fish and Wildlife Service, Georgia.
- The IUFRO Conference on 'Strong Winds and Trees: ecology and management, sponsored by WP 8.08.02 and to be held Aug 17-24 in Zurich, Switzerland, has been re-scheduled as part of a meeting planned by the University of Karlsruhe, Germany. The new dates are September 16-18, 2003. You must register your interest NOW on the Web site of the Karlsruhe conference <http://www.ifh.uni-Karlsruhe.de/ifh/science/aerodyn/windconf.htm>. Abstracts may be submitted at that site by Feb 15th. Contributions covering management impacts of strong winds, wind climatology, ecological dynamics and strong winds, post-storm damage responses will be additional topics reflecting the merger of the IUFRO conference. The plan is to produce a special issue of an international journal, in addition to the conference proceedings published by Karlsruhe University.
- The International Union of Forestry Research Organization (IUFRO), Centre for International Forestry Research (CIFOR) & Food and Agriculture Organization of the U.N. (FAO Non-Wood Forest Products Programme) have organized a side-event at the World Forest Congress in Quebec City, Canada, on the state of scientific and traditional knowledge about non-wood forest products (NWFP) and their management, to be held on Saturday, September 20. It will focus on identifying key strengths and weaknesses in the social, ecological, and economic sciences of these biological resources and explore ways that institutions, professionals and countries can better collaborate to advance the sustainable and socially equitable development and sciences on NWFP.
- The Forest Genetic Resources Working Group and the Silviculture Working Group of the North American Forest Commission/FAO will hold another side event, a one-day symposium on Silviculture and the Conservation of Genetic Resources in Sustainable Forestry. This satellite symposium will be held on Sunday, September 21, 2003. More information on these groups is available at <http://www.fs.fed.us/global/nafc>.
- The National Forest Foundation and the Forest Service have joined together to create the Partnership Resource Center, a web-based point of entry to existing resources, organizations, tools and other materials on Forest Service partnerships. Navigate to <http://www.partnershipresourcecenter.org>.
- Another handy website is the Virginia Tech dendrology page. It has excellent information and graphics on tree identification and properties, with links to the USDA Silvics manual pages. The URL is <http://www.cnr.vt.edu/dendro/dendrology/map/zonemap.htm>.

Publications :

FY 2003 (*denotes new publication this month)

*Glitzenstein, J.S, Streng, D.R., and **Wade, D.D.** 2003. Fire frequency effects on longleaf pine (*Pinus palustris* P. Miller) vegetation in South Carolina and Northeast Florida, USA. *Natural Areas Journal* 23:22-37.

Escalante Fernandez, R. Monreal Rangel, S., **Stanturf, J.**, Arseneau, C., Nantel, P. 2002. Forest plantations in North America. Report to the North American Forestry Commission. 26pp.

*Hanula, J.L., **Wade, D.D.** 2003. Influence of long-term dormant-season burning and fire exclusion on ground-dwelling arthropod populations in longleaf pine flatwoods ecosystems. *Forest Ecology and Management* 175 (1-3): 163-184.

Rideout, S. and Oswald, B.P. 2002. Effects of prescribed burning on vegetation and fuel loading in three east Texas state parks. *Texas J. Science* 54(3): 211-226.

Stanturf J.A. and Madsen P. 2002. Restoration concepts for temperate and boreal forests of North America and Western Europe. In: *Forest Ecosystems: Ecology, Conservation and Sustainable Management* (eds. Jiang Z., Centritto M., Liu S. & Chiatante D.). *Plant Biosystems* 136, 143-158.

Stanturf, J.A., Wade, D.D., Waldrop, T.A., Kennard, D.K., and Achtemeier, G.L. 2002. Fire in Southern Forest Landscapes. P. 607-630 (Chapter 25) In Wear, D.M. and Greis, J.G., editors, *Southern Forest Resource Assessment*. Gen Tech Rep. SRS-53. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station.

Moody, J.M. 2002. Fire and alternative fuel treatment effect on soil Nitrogen: A case study of Myakka River State Park. M.Sc. thesis, FL A&M Univ., Tall., FL. 52p.

Upcoming Events :

2003

Feb 3-4 West Gulf Forest Soils tour, Lufkin, TX

Feb 11-13 Southern Research Station Management Team meeting, Asheville; Stanturf to attend

Feb 24-27 Southern Silvicultural Research Conference, Biloxi, MS., unit staff to attend.

Feb 27-Mar 1 Coastal Plain Chapter, Society for Ecological Restoration annual meeting, Athens, GA

Mar 3-7 Functional Assistance Visit; Asheville admin team led by Jay Hundley, to Athens, GA.

Mar 12-14 Workshop on Forest Fire Modeling and Prediction in the Southeast United States, Tallahassee, FL; Goodrick, Liu, Achtemeier, Waldrop, and Stanturf to attend.

Mar 23-27 Molecular Studies Of Soil Organic Matter 225th ACS International Meeting New Orleans, LA; DiCosto to attend <http://membership.acs.org/g/geoc/>

***Apr 7-11** Geospatial 2003, Putting Geospatial Information to Work. Colorado Springs, CO <http://www.fs.fed.us/gstc/fsgeospatial/>

Apr 21-23 Dean's Tour to be held in at the University of Georgia in Athens, Georgia.

Apr 23-25 IUFRO Conference on Decision Support for Multiple Purpose Forestry: A Transdisciplinary Conference on the Development and Application of Decision Support Tools for Forest Management, Vienna, Austria; Kennard to attend and present.

May 11-16 Fifth International Conference on Science and the Management of Protected Areas (SAMPAA V), University of Victoria, Victoria, British Columbia, Canada. The theme will be Making Ecosystem Management Work: Connecting Managers and Researchers. For more information see <http://www.sampaa.org>

May 12-15 2nd Forest Engineering Conference, hosted by SkogForsk (The Forestry Research Institute of Sweden), Växjö, Sweden; Stanturf to present poster. <http://www.skogforsk.se/fec>

***May 22-24** International Conference on Economics of Sustainable Forest Management, to be held at the University of Toronto, in Toronto, Canada.

Jun 16-20 Fourth Annual North American Forest Ecology Workshop, Oregon State University in Corvallis, OR. Abstracts due Jan 17, 2003. <http://outreach.cof.orst.edu/nafew/>

Jun 22-25	57th Annual Meeting of the Forest Products Society, Doubletree Hotel, Bellevue, WA. Alex Clark will make presentation.	Nov 16-20	Second International Congress On Wildland Fire Ecology And Fire Management, in conjunction with the Fifth Symposium on Fire and Forest Meteorology
Jul 20-24	10 th North American Forest Soils Conference, Sault Ste. Marie, Ontario, Canada; Stanturf, Callaham to attend and present posters. http://www.fs.fed.us/forestsoilsconference .	*Nov 19-22	Society for Ecological Restoration 15 th International Conference, Austin, TX (note new dates). http://www.ser.org
Aug 11-14	IUFRO Working Group for Seed Physiology and Technology conference to be held at the Georgia Center, Athens, GA.	Nov-Dec	IEA Short Rotation Bioenergy (Task 30) meeting, New Zealand and Australia
Sep 7-10	Council on Forest Engineering annual meeting, Bar Harbor, ME; http://www.forest-resources.umaine.edu/nercofe/cofe2003.htm	2004 Aug	Society for Ecological Restoration 16 th International Conference, Victoria, British Columbia
*Sep 16-18	IUFRO Conference on 'Strong Winds and Trees: ecology and management, sponsored by WP 8.08.02 and University of Karlsruhe, Germany; re-scheduled from Aug 17-24 in Zurich; http://www.ifh.uni-Karlsruhe.de/ifh/science/aerodyn/windconf.htm .	*Sep 3-7	European Forest Institute (EFI) annual meeting, Bangor, Wales (UK).
*Sep 18	Agroforestry and Wildlife Field Day, Griffin, GA	Oct 31-Nov 4	Soil Science Society of America annual meeting, Seattle, WA
Sep 21-28	12 th World Forestry Congress, Quebec City, Canada; Stanturf to attend. http://www.wfc2003.org	Nov	Short Rotation Woody Crops Operations Working Group Biennial Meeting, Aiken, SC; dates TBA
*Sep 28-Oct 2	The Question Of Conversion of Coniferous Forests meeting, Freiburg, Germany; contact for further information: instww@uni-freiburg.de	2005 Aug 8-13	IUFRO World Congress, Brisbane, Australia; Stanturf to Attend.
Oct 4-8	3rd International Wildland Fire Conference, sponsored by the North American Forest Commission's Fire Management Working Group, Sydney, Australia.	Aug or Sep	Society for Ecological Restoration 17 th International Conference, Zaragoza, Spain
Oct 25-29	Society American Foresters Annual Meeting, Buffalo, NY	Nov 6-10	Soil Science Society of America annual meeting, Salt Lake City, UT
Nov 2-6	Soil Science Society of America annual meeting, Denver, CO		

SRS-4104 Project Leader's Report

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